

IN THE CLAIMS-

Please amend the claims as follows:

1. (currently amended) A receptor-specific liposome for delivering an eye-specific therapeutic gene to an ocular cell[s], said receptor-specific liposome comprising:
a liposome having an exterior surface and an internal compartment;
an eye-specific therapeutic gene ~~comprising a sufficient amount of genetic information to encode a therapeutic agent, said therapeutic gene being located within the internal compartment of said nanoecontainer;~~
a plurality of targeting agents comprising blood-retinal barrier and ocular cell membrane targeting agents; and
a plurality of conjugation agents wherein each targeting agent is connected to the exterior surface of said liposome ~~nanoecontainer~~ via at least one of said conjugation agents.
2. (original) A receptor-specific liposome according to claim 1 wherein said liposome exterior surface defines a sphere having a diameter of less than 200 nanometers.
3. (currently amended) A receptor-specific liposome according to claim 1 wherein said ~~therapeutic~~ eye-specific gene is ~~encodes a therapeutic agent~~ selected from the group consisting of ~~genes encoding~~ opsin protein of rhodopsin (RHO), cyclic GMP phosphodiesterase α -subunit (PDE6A) or β -subunit (PDE6B), the alpha subunit of the rod cyclic nucleotide gated channel (CNGA1), retinal pigmented epithelium-specific 65 kD protein gene, retinal binding protein 1 gene, ATP binding cassette retina gene, peripherin/retinal degeneration slow gene, rod outer segment membrane protein 1 gene, RPE65, RLBP1, ABCR, peripherin/RDS, ROM1, arrestin (SAG), alpha-transducin (GNAT1), rhodopsin kinase (RHOK), guanylate cyclase activator 1A (GUCA1A), retina

specific guanylate cyclase (~~GUCY2D~~), the alpha subunit of the cone cyclic nucleotide gated cation channel (~~CNGA3~~), and cone opsin genes ~~such as BCP, GCP, and RCP~~.

4. (currently amended) A receptor-specific liposome according to claim 1 wherein said eye-specific ~~therapeutic~~ gene is located within a plasmid.

5. (currently amended) A receptor-specific liposome according to claim 1 wherein the molecular weight of said eye-specific ~~therapeutic~~ gene is above 30,000 Daltons or wherein said therapeutic gene comprises at least 100 nucleotides.

6. (currently amended) A receptor-specific liposome according to claim 1 wherein between 5 and 1000 targeting agents are conjugated to ~~the~~ said exterior surface of said liposome.

7. (currently amended) A receptor-specific liposome according to claim 1 wherein between 25 and 40 targeting agents are conjugated to ~~the~~ said surface of said liposome.

8. (original) A receptor-specific liposome according to claim 1 wherein said conjugation agent is selected from the group consisting of polyethylene glycol, sphingomyelin and organic polymers.

9. (currently amended) A receptor-specific liposome according to claim 1 wherein said blood-retinal barrier targeting agent and ocular cell membrane targeting agent is the same targeting agent.

10. (currently amended) A receptor-specific liposome according to claim 1 wherein said targeting agent is selected from the group consisting of insulin, transferrin,

insulin-like growth factor (IGF), leptin[,] and low density lipoprotein (LDL), ~~or the corresponding peptidomimetic monoclonal antibodies that mimic these endogenous peptides and bind to the insulin, transferrin, IGF, leptin, or LDL receptor on the blood-retinal barrier and ocular cell membrane.~~

11 – 22 (cancelled)

23. A pharmaceutical preparation comprising:

a) a receptor-specific liposome comprising:

a liposome having an exterior surface and an internal compartment;

~~an eye-specific therapeutic gene comprising a sufficient amount of genetic information to encode a therapeutic agent, said therapeutic gene being located within the internal compartment of said nanoecontainer;~~

a plurality of targeting agents comprising blood-retinal barrier and ocular cell membrane targeting agents; and

a plurality of conjugation agents wherein each targeting agent is connected to the said exterior surface of said liposome via at least one of said conjugation agents; and

b) a pharmaceutically acceptable carrier for said receptor-specific liposome.

24. A pharmaceutical preparation according to claim 23 wherein said blood-retinal barrier targeting agent and said ocular cell membrane targeting agent is the same targeting agent.

25. (new) A receptor-specific liposome according to claim 1 wherein said targeting agent is selected from the group consisting of peptidomimetic monoclonal antibodies that bind to the insulin-receptor on the blood-retinal barrier and

peptidomimetic monoclonal antibodies that bind to the insulin receptor on the ocular cell membrane.

26. (new) A receptor-specific liposome according to claim 1 wherein said targeting agent is selected from the group consisting of peptidomimetic monoclonal antibodies that bind to the transferrin receptor on the blood-retinal barrier and peptidomimetic monoclonal antibodies that bind to the transferrin receptor on the ocular cell membrane.

27. (new) A receptor-specific liposome according to claim 1 wherein said targeting agent is selected from the group consisting of peptidomimetic monoclonal antibodies that bind to the insulin-like growth factor receptor on the blood-retinal barrier and peptidomimetic monoclonal antibodies that bind to the insulin-like growth factor receptor on the ocular cell membrane.

28. (new) A receptor-specific liposome according to claim 1 wherein said targeting agent is selected from the group consisting of peptidomimetic monoclonal antibodies that bind to the leptin receptor on the blood-retinal barrier and peptidomimetic monoclonal antibodies that bind to the leptin receptor on the ocular cell membrane.

29. (new) A receptor-specific liposome according to claim 1 wherein said targeting agent is selected from the group consisting of peptidomimetic monoclonal antibodies that bind to the low density lipoprotein receptor on the blood-retinal barrier and peptidomimetic monoclonal antibodies that bind to the low density lipoprotein receptor on the ocular cell membrane.